WHAT IS CLAIMED IS:

1.   A color conversion relation derivation method
of deriving a color conversion relation between a first
color space and a second color space, the color conversion
relation derivation method comprising:

an area forming step that forms a plurality of
areas filling the first color space;

a partial function derivation step that derives,
for each of the areas formed in the area forming step, a
partial function representative of a color conversion
between coordinates in the area and coordinates of the
second color space using a set of an arbitrary sample point
provided in the first color space and a point in the second
color space, which is associated with the sample point; and

a whole function derivation step that combines the
partial functions for the respective areas derived by the
partial function derivation step to derive a whole function
representative of the color conversion relation through the
first color space in its entirety.

2.   A color conversion relation derivation method
according to claim 1, wherein the area forming step forms,
as the plurality of areas, a plurality of areas overlapping
with one another, and

the whole function derivation step combines the
partial functions in a range that the areas are overlapped

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with one another.

3. A color conversion relation derivation apparatus for deriving a color conversion relation between a first color space and a second color space, the color conversion relation derivation apparatus comprising:

an area forming section that forms a plurality of areas filling the first color space;

a partial function derivation section that derives, for each of the areas formed in the area forming section, a partial function representative of a color conversion between coordinates in the area and coordinates of the second color space using a set of an arbitrary sample point provided in the first color space and a point in the second color space, which is associated with the sample point; and

a whole function derivation section that combines the partial functions for the respective areas derived by the partial function derivation section to derive a whole function representative of the color conversion relation through the first color space in its entirety.

4. A color conversion relation derivation program storage medium storing a color conversion relation derivation program which causes a computer to operate as a color conversion relation derivation apparatus, when the color conversion relation derivation program is incorporated into the computer and is executed, the color

conversion relation derivation apparatus comprising:

an area forming section that forms a plurality of areas filling the first color space;

a partial function derivation section that derives,

5   for each of the areas formed in the area forming section, a partial function representative of a color conversion between coordinates in the area and coordinates of the second color space using a set of an arbitrary sample point provided in the first color space and a point in the second

10   color space, which is associated with the sample point; and

a whole function derivation section that combines the partial functions for the respective areas derived by the partial function derivation section to derive a whole function representative of the color conversion relation

15   through the first color space in its entirety.